



Focus on Pharmaceutical Waste

from Ecology's Hazardous Waste and Toxics Reduction Program

Conditional Exclusion for the Disposal of Controlled Substances, Legend Drugs*, and Over-the-Counter Drugs

To whom does this exclusion apply?

- Police organizations: This exclusion applies to the waste from police evidence rooms.
- Hospitals, pharmacies and people who are authorized by the State Board of Pharmacy to possess controlled substances and prescription drugs (called licensees).
- This exclusion does not apply to manufacturers of pharmaceuticals.

Why was this exclusion created?

Pharmaceuticals are an important part of maintaining human health. But compounds in pharmaceuticals that have therapeutic benefits for humans at the right doses can be pollutants in the environment. They need to be kept out of our water. Pharmaceuticals thrown into the regular garbage can be used inappropriately and cause hazardous exposures. The Department of Ecology created this exclusion to make it easier to dispose of pharmaceuticals in a way that minimizes the chance of inappropriate use and risk to the environment. This publication is to give you information on this exclusion and resources for pharmaceutical management. The text of the exclusion is in the Washington State *Dangerous Waste Regulations* (Chapter 173-303 of the Washington Administrative Code, section -071 (3) (nn)).

What does this exclusion allow?

It allows waste pharmaceuticals that are dangerous waste *only* because of Washington State's criteria for toxicity and persistence to be excluded from the rest of the *Dangerous Waste Regulations* if they are destroyed in an incinerator that meets certain performance standards. The state cannot change federal law, so pharmaceuticals that designate as a hazardous waste under the criteria set in the federal law, the Resource Conservation and Recovery Act (RCRA), must still be disposed as dangerous waste. Information on the state's *Dangerous Waste Regulations* can be found on the Internet:
<http://www.ecy.wa.gov/programs/hwtr/index.html>

So what do I do?

First, try to minimize your pharmaceutical waste.

If you are a police organization:

- Work with your officers and prosecutors to document evidence in the field.
- Store only the necessary amount of drugs as evidence.

If you are a medical facility:

- Use good inventory controls to prevent purchasing too much.
- Analyze why pharmaceuticals become waste once they leave the pharmacy. This could lead to new ways of preparing doses or other waste-reduction activities.
- Medical facilities can use reverse-distribution companies that can take back recalled or nearly expired pharmaceuticals.

*"Legend Drugs" are drugs available only by prescription from a registered, licensed pharmacist.

Second, determine if the pharmaceutical is a federally regulated hazardous waste under RCRA criteria. See the Department of Ecology's Web page or regulations for complete details.

Here is an example of the steps to find out whether your waste is federally regulated:

1. Compare the active ingredient in the pharmaceutical to the list of chemical products in Section - 9903 of Washington Administrative Code 173-303. If you have a match, you have a hazardous waste.
2. Determine if the pharmaceutical will ignite at 140°F or less (60°C or less). The label or other packaging might state this. Solutions with greater than 24 percent alcohol are ignitable.
3. Determine if the pharmaceutical is corrosive. Pharmaceuticals are corrosive if the pH is ≤ 2 or ≥ 12.5 .
4. Determine if the pharmaceutical is reactive. Reactive drugs tend to be unstable and may explode or react rapidly or violently with water or other materials.
5. Determine if the pharmaceutical contains certain toxic constituents and at what level. These toxic constituents include some organic chemicals and some heavy metals. The metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. Other examples are chloroform, cresols, lindane and preservatives containing mercury.

If any of this second step applies, your pharmaceuticals are federally regulated hazardous waste and need to go to an incinerator or other facility that has a RCRA permit. You may also need to determine whether the facility can even accept controlled substances.

Third, any remaining non-federally regulated pharmaceuticals may be eligible for the exclusion. You can use this exclusion only for state-regulated dangerous waste. Our state criteria includes determining the toxicity of the ingredients in the waste and assessing if the waste includes halogenated organic compounds (HOCs) and certain polycyclic aromatic hydrocarbons (PAHs). You will need a complete list of ingredients and their percentages or test data to do this designation. Our Web page can help you complete this step or you can call the Ecology offices for assistance.

Note: Some facilities choose to manage their non-regulated waste pharmaceuticals as if they were dangerous waste to use this exclusion and have them destroyed.

If any of this third step applies to you, your pharmaceuticals can go to an incinerator that meets the conditions in this exclusion.

For more information:

- Visit www.ecy.wa.gov/programs/hwtr/pharmaceuticals for more on this topic and a disposal flowchart.
- Contact the nearest Department of Ecology regional office and ask to speak to someone in the Hazardous Waste and Toxics Reduction Program.

Central Region (509) 575-2490
Eastern Region (509) 329-3400

Northwest Region (425) 649-7000
Southwest Region (360) 407-6300

The Department of Ecology would like to acknowledge the generous assistance of the King County Interagency Regulatory Analysis Committee's Pharmaceutical Workgroup on this issue.

If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.